

# Reality Check: Notions of Accessibility in Today's Architectural Design Practice

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## Abstract

Understandings of accessibility have evolved from focusing on wheelchair accessibility to more integrated notions like inclusive design, according to which everybody should be able to use space in an equitable and independent way. In addition, architectural practice witnessed the arrival of new professional actors in project design and delivery, including accessibility advisors. Given these evolutions, the study presented here examines how accessibility is understood and thought of in architectural practice today, what motivates architects to collaborate with accessibility advisors, and what they expect from this collaboration. Interviews with professional architects and accessibility advisors suggest that, in today's architectural design practice, interpretations of accessibility stretch from strictly following accessibility legislation to a broader interest (displayed by architects) or more integrated forms of advice (offered by advisors). The wish to attend to the diversity of people's abilities and conditions exists, but is not fulfilled by legislation, and the norms and procedures it imposes. The presence of professional accessibility advice holds potential to reconcile both, provided that a synergy with legal procedures is found and that advisors' roles can be developed from checking whether design proposals meet accessibility legislation to informing architects about diverse situations of use and offering them best practice examples.

## Keywords

Accessibility; architecture; design practice; diversity; inclusive design; legislation

The past decades witnessed an evolution in how accessibility is understood, from focussing on wheelchair accessibility to more integrated notions like *universal* (Mace 1985) or *inclusive design* (Clarkson *et al.* 2003), according to which everybody should be able to use products, spaces and services in an equitable and independent way. Especially in product design, the latter have been picked up by design consultancies, although discrepancies exist between theoretical models and industry practice (Dong *et al.* 2003). In architectural design, by contrast, the uptake of more integrated notions of accessibility seems relatively limited so far.

The study presented here therefore aims to investigate how accessibility is understood in architectural practice today. Questions addressed include: what notion(s) of accessibility do architects and accessibility advisors adopt? What triggers the collaboration between both? And what do architects expect from it? After sketching the context that triggered this study, we report on a set of interviews with professional architects and accessibility advisors. This interview material is used to shed a light on the notion(s) of accessibility that shape today's architectural practice.

## Context

Understandings of accessibility underwent considerable changes in the past decades. Amongst designers an awareness seems to have grown that design should take into account the diversity of people's abilities and conditions. This change in attitude is reflected by the conceptual framework and corresponding terminology used in relation to this topic.

*Accessibility* is described as the ability to reach, access and use a building, space, service or medium (e.g., CTPA *s.d.*). This description suggests a broad(er) interpretation of accessibility which is not limited to physical accessibility, and includes communication, services and signalling. *Integral accessibility* aspires a similar goal, but emphasizes its importance for everybody (e.g.,

CTPA s.d.). A barrier-free footpath benefits wheelchair users, but also older persons, pregnant women, (grand)parents pushing a pram, etc. To apply these accessibility concepts in practice, design approaches like *universal* (Mace 1985) and inclusive design (Clarkson *et al.* 2003) are advanced. Universal design, for instance, arose from the ‘disability rights movement’ in the 1960s, and formulates seven design principles to arrive at a design that is “usable, to the greatest extent possible, by all people throughout their lifespans, without adaptation or specialised design” (Mace 1985).

In architectural practice, the uptake of these new concepts of and approaches to accessibility seems rather limited so far. Studies suggest that professional architects mainly think about how they themselves experience a situation, and insufficiently empathize with future users (Imrie 2003). Moreover, although accessibility legislation requests that public buildings be accessible, in reality many of them are not (yet). A recent survey in the city of Leuven unmasked 75% of the 1500 commercial buildings in the city centre as inaccessible for wheelchair users (Eckert 2011), even when applying less stringent accessibility criteria than legally required. From architects’ perspective, however, accessibility legislation is felt as restricting their creativity and taking away their challenge as designer to come up with intelligent solutions (Gray *et al.* 2003). In a recent survey amongst the ca. 7,400 architects in Flanders, accessibility legislation ended up in the top 10 of most irritating administrative domains of their profession (NAV 2012).

This tendency to cast accessibility in legislation fits in with the emergence of a risk and regulatory society which, since the mid to end of the 20<sup>th</sup> century, profoundly impacted architects’ profession (Imrie & Street 2011). Together with global challenges like climate change and population ageing, it introduced newly emerging professional actors in project design and delivery (e.g., project managers, sustainability consultants, accessibility advisors), some of whom take over functions previously the preserve of architects. As a result, architects work increasingly within multidisciplinary teams, composed of people with expertise on different aspects of architectural design practice, including accessibility. If we want to investigate how accessibility is understood in architectural practice today, we should thus be aware that the architect is but one actor in the ‘messy reality’ of design (Cuff 1992, Imrie & Street 2011).

## Methods

The study reported here is part of a larger study on the collaboration between architects and accessibility advisors, which combined interviews with observations of accessibility consults and analysis of project documents. This paper focuses on the notion(s) of accessibility currently found in architectural practice, for which we rely mostly on interviews.

Given the evolution in architectural design practice sketched above, we interviewed both architects and accessibility advisors. Architects were selected who had collaborated with an accessibility office at least once. Based on the interviews with them, we selected the accessibility advisors. Different standpoints, expectations and other aspects of the collaboration were discussed in detail.

We interviewed architects from seven architecture firms (Table 1), differing in terms of location, size and the kind of projects they design. By deliberately selecting architecture firms active in different parts of Flanders, we made sure that the interviewees had collaborated with accessibility offices from different provinces. In the interviews with architects, three different accessibility offices were referred to. It seemed thus logical to involve accessibility advisors from these offices in our study too. The three offices are active in four different provinces (see Table 2).

Interviews were semi-structured; we asked each interviewee the same questions, while leaving room to respond to their answers. We used open questions, allowing interviewees to bring up topics which might be neglected otherwise. Interview questions were formulated such that the interviewee’s answers were steered as little as possible (Baarda & De Goede 2007).

architecture	location	size (#	projects	collaborated with
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firm		people)		accessibility office
Firm-1	CityG	30	new built projects, private (single & multiple family houses) & public buildings	Office-A
Firm-2	CityA	10	housing, small refurbishments, public buildings for province or city	Office-C
Firm-3	CityL	20	collective housing projects (social & private), schools, care homes or service centres	Office-A
Firm-4	CityM	10	housing, both new built and refurbishments, variety of public buildings	Office-A, Office-B
Firm-4	near CityL	45	big-scale projects: hospitals, school buildings, light industry, offices, care homes	Office-B
Firm-6	CityT	10	large-scale mixed-use urban projects: filling half a city or certain city quarters	Office-B
Firm-7	near CityL	14	renovation projects of protected historic sites like abbeys, school buildings and cloisters, usually with a public (school, museum or religious) function	Office-B

Table 1: Participating architecture firms

accessibility office	Location / Province	Tasks
Office-A	CityA / ProvinceA	<ul style="list-style-type: none"> <li>accessibility advice, both during design (based on plans) and in the context of building permit applications</li> <li>training and sensitization</li> <li>screening of existing buildings</li> </ul>
Office-B	CityB / ProvinceB & ProvinceD	<ul style="list-style-type: none"> <li>accessibility advice (based on plans)</li> <li>assistance for building permit applications</li> <li>screening and audits of existing buildings</li> </ul>
Office-C	CityC / ProvinceC	<ul style="list-style-type: none"> <li>accessibility advice</li> <li>screening of existing buildings</li> <li>training and sensitization</li> </ul>

Table 2: Participating accessibility offices

The interviews with the architects covered three parts. First, we tried to obtain information about the architect's role within the firm, and their take on accessibility. Subsequently we probed the architect's reasons for and expectations towards the collaboration. We also asked which accessibility office(s) they had collaborated with and how they got into contact with these. Finally, we discussed how the collaboration took shape: how much time was spent, what media were used, and what information it was based upon.

The accessibility advisors were selected based on the architects' interviews. Interviewing them allowed us to gain a better understanding of the collaborations within each project. The interviews with them were built up in a similar way as those with the architects, except that they focused on the experiences and findings of the advisor within the collaboration with the architect.

The interviews were transcribed and then analyzed in a qualitative way. Themes were assigned to the transcripts at different levels, using concepts from literature and concepts emerging from the data itself. Themes and concepts were discussed amongst the authors to obtain more rigorous

findings. As the study focused on the collaboration, themes were selected such that they provide insight in how the collaboration is experienced by both architects and accessibility advisors.

## Findings

Both the notion of accessibility and the possible collaboration with an accessibility advisor turns out to be approached in different ways. In what follows, we describe the notions of accessibility as they appeared in the interviews with architects and accessibility advisors. Besides addressing their overall take on accessibility, we investigate what triggers the collaboration between both and what architects expect from it. This is further complemented with the advisors' perceived roles in the collaboration.

### *From obligation to personal affinity*

In the interviews, accessibility came to the fore in different guises. One architect described it as follows: "... for us that is a bit something that is additional, what you have to take into account because it is an obligation. At the start, yes, then you curse, of course... But it does have its merit, we notice ... It does facilitate the use of a building." Regarding accessibility, he pointed out, some issues need to be taken into account from the start. According to him, the accessibility decree imposes rules, like turning circles needed for wheelchair users, which impact the magnitude of spaces. In their firm, he emphasized, it is rarely a matter of conceptual starting points, but rather, as he clarified: "We take that size as ... purely technical, to be able to handle the measurement..."

A similar view was expressed by the architects of another firm who, at the time of the interview, were confronted with accessibility mainly in the context of school buildings. When asked about the firm's take on accessibility, one of them replied: "Honestly, I have to say that within our firm accessibility is viewed rather as an obligation, a norm you have to meet. Actually you are not that familiar with it since you do not experience it as an obstacle yourself. You are perfectly able-bodied yourself, so you rather see it as a norm you have to follow and a number of difficult lines inside which you must colour." This hints at the difficulty of empathizing and having to fall back on personal experiences (Imrie 2003). Accessibility legislation often forms the sole source informing architects about disability experience, and a mere technical one at that.

Related views consider accessibility as one of the aspects that must be considered, one you can no longer ignore in public buildings. An architect accounted: "It is something to treat too. But it is not something we are specifically occupied with more than with other things. It is especially important in the design to get these big lines in there. I mean, reaching all spaces with an elevator, for that kind of thing it is very important. For the further detailing it is less..." Further detailing refers to, e.g., contrasting colours for doors and door frames, which does not always resonate with the interior concept. Furthermore, the architect wants to avoid that accessibility interventions are made which hinder other users; e.g., "...that the elevator is wheelchair accessible, that we place the position of the control panel such that it is OK, these are a sort of interventions indeed. That every floor is announced with a sound signal, then we wonder 'is this that important?' It occurs to me that someone without sight would also be able to use the elevator when the signal is not announced. You hear that the doors open... We don't go that far because sometimes it is also disturbing for other users." This architect is concerned with the "big lines" to assure a basic accessibility, but more importantly with how to incorporate these lines in the whole of the design. As such he hints at an understanding of principles that make a building accessible, rather than solutions prescribed in detail.

Accessibility measures are considered particularly disturbing in renovation and reuse of protected monuments (Heylighen 2012). An architect working exclusively in this context did not bring this up, however. When asked what accessibility means to him and how it is addressed in his firm, he replied: "Often these [monuments] are buildings with a public function, school function, museum function, religious function, ... So there accessibility is always an issue, of course." He added: "You do want to do it yourself too, of course, because you know that it is an important issue."

Some firms even go a step further and present themselves as strongly committed to accessibility. One architect made clear that he is highly interested in the topic and that, since the start of his career, this is an important point of attention to him. In the 1980s, however, there was no accessibility decree yet, so other methods were applied to obtain an accessible design. About this situation he said: "... those designs we made too, together with the people who were going to live there, who were known. At that time I noticed from everyday practice that there were norms ... that was considerably less stringent than the accessibility as it is now. I think that, by making the accessibility decree, they have set the bar too high, really... unrealistically high." This architect seemed to have quite some experience with accessibility and a clear opinion about the difference between present and past. Norms are again considered as becoming increasingly technical, and at the same time hindering this architect's own experience built up from commitment over the years.

Another firm too has a long-term experience in designing accessible environments, and started looking for ways to integrate accessibility into the design process long before the accessibility decree existed. Moreover, for the architect representing this firm, the interest in accessibility seems a rather personal matter too. It would result in part from the architect's education: "... I have studied in [architecture school X] and there was a very strong philosophy to start from the person. How do you experience something? How do you sense something? In this way I have also learned to design, walking through a project and looking at that project through different glasses or standpoints." Yet, also the personal confrontation with certain impairments played a role: the outspoken interest in accessibility "has grown increasingly because I had a father-in-law who had had a cerebral haemorrhage and thus was only half able to walk. Then I discovered, by walking with this man on the street, that it is annoying when somebody parks on the footpath or when the pavement is too high ... By being myself short in stature, also..."

This broader, more contemporary take on accessibility resonates with the views expressed by the accessibility advisors. One advisor described her view of accessibility as follows: "Accessibility means to me that everybody can make use, in an equitable way, of buildings, facilities, activities, anything." A colleague from another office seemed to share this view and said: "... that everybody can do his thing in an equitable, independently from each other. Everybody that is very extensive, that is not limited to the people with a physical impairment or limitation as we say, but so really everybody. Also a mother with a stroller, for instance, has as many problems to get somewhere as someone in a wheelchair. This is in fact accessibility for us..."

However, a more contemporary view turns out to be not always applicable, the interviews suggest. One architect we interviewed works primarily on designing care homes. When we probed his take on accessibility, this turned out to be rather nuanced: "In this context accessibility is of course an important theme and a very broad concept, to that extent that we do view accessibility a bit differently than the accessibility office. In that sense, we are dealing with, certainly in care homes, with people who are no longer able to do a number of things independently. Whereas, accessibility starts mainly from the independent use of spaces and the like. So there is a minor difference in nuance..."

In summary, the views expressed by the architects suggest that the take on accessibility differs from firm to firm. In some firms, accessibility seems to ask the architects' attention because it is a (whether or not important) component of a design, one that has to be addressed. In other firms, attention for it seems to be steered by a certain affinity with the topic, to which a personal engagement may give rise. The opinions expressed by the advisors are in line with contemporary understandings of accessibility, yet may not be applicable in all contexts.

### ***Why collaborate?***

When architects decide to obtain professional accessibility advice they contact an accessibility office. This does not happen just like that. Often there is a reason why the step towards collaboration is made. In what follows a number of these reasons are discussed.

Some architects mentioned explicitly that they themselves took the initiative to contact an accessibility advisor. When asked about the origin of her collaboration with an advisor, one architect responded: "Often on our own initiative, that we just say: 'We do want that advice, we do want that it is accessible!'"

However, with the will to design an accessible building comes the insecurity about their own knowledge and interpretability of the legislation: "We will always present it [to an advisor] because there are often things that have been changed and that you cannot always find out and they are always informed about these, we think. It also makes the permit period easier, to have your application treated more quickly. If you have already presented it for advice, they can also give advice more quickly to the town planning administration..." The architect continued: "For us it is a security that is built in, that no too big comments will come on the permit. Because, yes, it could be rejected because of that. For us it is first and foremost a security we want to build in." This reasoning, building in a kind of security, was also found in another testimony: "Legislation is always interpretable, the one is more stringent in these matters than the other... we do start from the legislation. We do know it in the meantime. But [the accessibility advisors] look at it even more, how should I say... It is a double check, actually." One of the accessibility advisors confirmed: "If they [the architects] first come over here, and we can already issue 'favourable' or 'favourable under conditions', then they have in fact won half a year or a year in the procedure or duration of a project." What this seems to suggest, is that consulting with the accessibility office about possible adaptations of a design takes less time than waiting for the permit-granting authority's decision and making the changes afterwards.

Other than the architect wanting to secure the building permit, the client can formalize this practice by demanding an accessibility advise as part of the contract. Especially municipalities, which have an exemplary role in society, often do so to support the government's accessibility policy. For the design of a primary school, for instance, one firm was obliged by the client to subject the project to an accessibility test. In another firm the client's role seems to be somewhat different; according to their own saying the firm always has its projects screened, unless the client explicitly says it is not needed. The architect of this firm described his motivation to collaborate with an accessibility office as follows: "...out of ourselves, that is one. Plus, secondly, our projects are often subsidized by the [regional] government and they do request that we have [the project] screened, have it checked."

The latter hints at a third reason giving rise to the collaboration brought up by several of the architects interviewed: the subsidy scheme. Related to accessibility, architects are confronted with different sorts of subsidies. In the case referred to above, a subsidy was issued by the regional government relating to care home projects. For the renovation of an abbey, another firm was confronted with the regional tourist organization's subsidies. Yet another firm had to meet accessibility standards for the design of a community centre because of the provincial subsidy scheme. That collaboration is often triggered in this way is confirmed by the accessibility advisors. As one of them mentioned, "[m]ost architects who come over are obliged by two subsidy schemes [...] to obtain advice." Subsidy schemes thus seem to be an effective incentive to collaborate with an accessibility adviser if this is taken up as prerequisite for the subsidy.

The collaboration's financial impact was brought up as an important argument in a different way too. As one architect mentioned, a reason *not* to ask for an accessibility advise is its financial cost: "... thus we have asked and then they give you two tenders ... it costs quite a lot ... €260 for the advice about the building permit and almost €1500 for a complete advice... I leave the choice to [the clients], but it is rather foolish to take the complete advice... who is going to pay that much for it? So then we opt for the limited advice..." Her colleagues added: "A free of charge advice on your plans would be good perhaps" and "If it were free of charge then I would make use of it, I think ... you can of course figure out all those rules but perhaps you forget some..." On the other hand, the accessibility advisors consider this fee as a just cost. According to one of them, the cost of the advice is outweighed by the amount of time and consequently money that can be saved in the procedure of obtaining a building permit, as described above. In fact, one architect confirmed this as he explained: "Our building permit had in this case been rejected, so town planning said that an

advice of accessibility was needed, since that was not included..." Architects handing in a design that violates the accessibility legislation are obliged to collaborate with an accessibility advisor, and thus to go back several steps in the process.

### ***Architects' expectations***

The architects' testimonies reflect multiple aspects of the design process that lead to the collaboration with an accessibility advisor. However, the architects also hold certain expectations with regard to the course, result and possibly other aspects of the future collaboration.

Asked what she expected initially from collaborating with an advisor, an architect responded: "Usually we try to solve the problems with what can be found on the website. If we really have a specific question of which we say 'Apparently we cannot solve this well', then we ask this question either by phone, or via e-mail. We expect that they then give advice on the best way to solve this." Her reaction was limited to the phone and e-mail aspect of the collaboration, probably because she never collaborated with an advisor face-to-face. In the course of the interview two colleagues joined her, and an interesting discussion arose among them.

The architect seemed to expect from a collaboration with an advisor nothing more than purely checking the rules. One colleague agreed and added that an advisor will not be bothered to formulate design proposals. It is not entirely clear what both architects' responses were based upon. Perhaps they do not consider advisors capable of coming up with such proposals or they simply do not want their assistance on this. The other colleague made a comparison with collaborating with an engineer and consequently did not exclude design input from the accessibility advisor. Within a single firm, expectations may thus differ across individual architects.

Where this firm's architects seemed to prefer phone or e-mail contact for a specific question, another firm's architect prefers to present their questions during a personal conversation. When there are no specific questions, they still stop by to go through the plans, so that always all items are checked. He described his expectations towards the collaboration as follows: "Goh, yes I now that they themselves won't really seek a solution. I don't think you should really expect that they will join you designing either. I think that they, if there is something on the table, maybe should say: 'No, this is impossible' and then somehow do offer a solution and say why it is impossible..." He himself has not been confronted with this kind of situation yet, the architect further clarified, because the rules, according to him, are formulated such that they are clear and that actually there should not be a problem: "We [architects] should ascertain ourselves what should happen in the first place." He seemed to suggest that advisors' task is not in the first place to hand rules, but that architects should seek these themselves.

Another architect expects from an accessibility office mainly that the rules can be dealt with jointly in a designerly way. He emphasized in this respect the difficulty of interpreting these rules: "... there is always an interpretation possible or there is a situation that happens not to be described, does it comply or not? Somehow it thus would be interesting to be able to talk about that in a designerly way. Yes, testing together with them whether this still is within the spirit of what this rule has as objective or just not anymore." What he also expects to obtain from the advisor are examples, of possible signage panels, spatial solutions for accessibility, etc. Until now these are available only to a limited extent, according to the architect, but this is being worked on such that in the future more examples can be offered.

The architect representing one of the firms that, by their own account, have ample experience in accessible design, explains that their expectations towards the accessibility office take a slightly different shape: "... that is very difficult because we are already working on this intuitively ourselves and actually longer than the accessibility office exists... We have already solved many things, usually they point out small corners or edges to us. Like: 'This we would like to see more accessible' or 'This we would like to see differently.' In fact, it is the case that we would like to collaborate mainly for total projects on a bigger scale, not so much on these small details..."

Another firm, by contrast, was very enthusiast about these details. The architect contended: “[the accessibility advisors] can provide very concrete information, very concrete, indeed [...] I wasn’t aware of that in advance, that it would be that detailed.” The advice seemed to exceed the expectations in this respect. About formulating design proposals, the architect said: “... I can’t say that they have participated in the design, no, that not. We don’t expect that either.”

About architects’ (non-)expectation regarding accessibility advisors’ participation in designing, an accessibility advisor said: “I think as architect myself, I would not like it, if I go somewhere and they say: ‘Maybe you should do such and so...’ and you actually are offered a new design.” Therefore she understands the reaction of architects who do not expect an advisor to participate in designing. According to her feeling, architects expect foremost that the rules and norms are explained and checked because these are the things for which they are penalized when applying for a building permit.

Interestingly, one advisor brought up an expectation which had not been mentioned by the architects: “At this moment, the question is usually: ‘How can I deviate in order to get a building permit?’ [...] We are actually asked more for ‘How can we deviate?’ than ‘How will we do it?’” His impression is that architects expect from him that, everything that is not in line with the norms during design, he will accept as deviation. This is not the case, however. Accepting deviations does not happen like that.

Architects thus seem to hold various expectations regarding their collaboration with accessibility advisors. Some expect to receive a concrete answer to a specific question, be it face-to-face, by e-mail or by phone. Others demand an overall check of all sub-aspects described in the accessibility legislation, or would rather collaborate in a designerly way, on a big or small scale. Some expectations seem to be fulfilled right away, e.g., when a concrete answer is given to a question. Others even seem to be exceeded, like the architect who received more detailed information than hoped. Yet other expectations, like obtaining examples, do not seem to be lived up to entirely at this point, but apparently are being worked on.

## Discussion and Conclusion

In today’s architectural practice the notion of accessibility is interpreted in various ways, ranging from legal obligation to an architect’s personal point of departure. Equally varied are architects’ motivations to obtain professional accessibility advice—checking legislation, offering best practice examples, or describing actions in situations of use—and advisors’ descriptions of it—as short-cut for legal procedures, whether or not requiring co-design. In short, interpretations stretch from strictly following accessibility legislation to a broader interest (from architects) or more integrated form of advice (by advisors).

Within this variety, three issues stand out: the limited scope (and fragmented approach) of accessibility legislation, the desire of some (but not all) architects to broaden attention for and integrate people’s diversity, and the response to this desire of some advisors offering more integrated advice. A stumbling block seems to remain the financial and time investment (unless the legal procedure can be shortened). If collaboration with an accessibility advisor is to offer an added value, it should start from an integrated view of accessibility, which acknowledges the diversity in people’s abilities and conditions better than the legislation and procedural time savings do. If collaboration is limited to unilaterally checking whether the legislation is met, as currently seems to be the case, architectural practice will remain stuck in fragmented solutions, *i.e.*, the *a posteriori* additions architects are dreading.

To conclude, legislation imposes both norms and procedures, and is felt by architects to be fragmented and too prescriptive. The wish to broaden the attention for people’s diverse abilities and conditions exists, but is not fulfilled by legislation. Presence of accessibility offices holds potential to reconcile both, provided that a synergy with legal procedures can be found. Accessibility advisors can seek themselves whether the norms are addressed within the broader integrally accessible (or perhaps better: inclusive) design proposal. Moreover, other roles architects



demand, like informing (about legislation, and diverse use situations) and offering best practice examples can then be further developed.

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